AUTHOR INDEX

Abrams, J. Z.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Akiyama, T.
Breakthrough time on activated carbon fluidized bed adsorbers, 269

Altman, R. F.
ESP performance with atmospheric fluidized-bed combustion, 1455

Amaral, D.
Including uncertainty in assessments of sulfur oxide health risks, 399

Andelman, J. B.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Anderson, K. R.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Angel, A. L.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Apte, M. G.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Arbaugh, M. J.
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921

Arya, S. P. S.
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Avol, E. L.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Awerbuch, L.
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Ayres, R.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Baasel, W. D.
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327

Ball, J. C.
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Bao, X.
Water interference of pulsed fluorescence SO_2 monitor, 420

Bare, J. C.
Indoor air pollution source database, 670

Bassin, N. J.
The Environmental Protection Agency's hazardous waste research and development program, 377

Becker, A. R.
3-D flow modeling of a hazardous waste incinerator, 1050

Bedi, J. F.
Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Bell, F. W.
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Bennett, R. L.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Benz, A. D.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Biggs, R. H.
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Billick, I. H.
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Black, F.
Continuous measurement of diesel particulate emissions, 252

Boomer, B. A.
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426

Borrazzo, J. E.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Brna, T. G.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Brown, C. H.
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Brown, H. S.
Management of carcinogenic air emissions: a case study of a power plant, 15

Brunner, C. R.
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Bullin, J. A.
Validation of mobile source emission estimates using mass balance techniques, 1035

Butler, F. E.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Bytnerowicz, A.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Cabrera, H.
California statewide assessment of the effects of ozone on crop productivity, 928

Cahaly, R.
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Calabrese, E. J.
Remedial options for leaking underground storage tanks, 428

Carlton, J. D.
Medium-sulfur coal and fly ash resistivity, 209

Carpenter, G.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Carruthers, A. R.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Cassidy, W. A.
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168

Cernansky, N. P.
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

Cha, S
Continuous measurement of diesel particulate emissions, 252

Chang, B.-H.
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Chang, J. C. S.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Churchill, R. J.
SARA Title III, Section 313—looking ahead, 1376

Cichanowicz, J. E.
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Cohen, B. L.
Variation of radon levels in U.S. homes with various factors, 129

Cohen, J.
EPRI newsletter, 124, 532, 994

Conner, J. M.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Conner, W. D.
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Cooper, J. A.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Coppedge, E. A.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Cox, B. G.
Sample design considerations for indoor air exposure surveys, 1266

Coy, D. W.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Crawford, W. A.
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Cullinan, V.
A collaborative effort to model plant response to acidic rain, 777

Currie, R. M.
SARA Title III, Section 313—looking ahead, 1376

Cushey, M. A.
Simplified models of U.S. acid rain control costs, 1523

Cushing, K. M.
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90

Davidson, C. I.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Davidson, S. A.
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

AUTHOR INDEX

Abrams, J. Z.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Akiyama, T.
Breakthrough time on activated carbon fluidized bed adsorbers, 269

Altman, R. F.
ESP performance with atmospheric fluidized-bed combustion, 1455

Amaral, D.
Including uncertainty in assessments of sulfur oxide health risks, 399

Andelman, J. B.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Anderson, K. R.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Angel, A. L.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Apte, M. G.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Arbaugh, M. J.
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921

Arya, S. P. S.
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Avol, E. L.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Awerbuch, L.
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Ayres, R.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Baasel, W. D.
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327

Ball, J. C.
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Bao, X.
Water interference of pulsed fluorescence SO_2 monitor, 420

Bare, J. C.
Indoor air pollution source database, 670

Bassin, N. J.
The Environmental Protection Agency's hazardous waste research and development program, 377

Becker, A. R.
3-D flow modeling of a hazardous waste incinerator, 1050

Bedi, J. F.
Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Bell, F. W.
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Bennett, R. L.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Benz, A. D.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Biggs, R. H.
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Billick, I. H.
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Black, F.
Continuous measurement of diesel particulate emissions, 252

Boomer, B. A.
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426

Borrazzo, J. E.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Brna, T. G.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Brown, C. H.
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Brown, H. S.
Management of carcinogenic air emissions: a case study of a power plant, 15

Brunner, C. R.
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Bullin, J. A.
Validation of mobile source emission estimates using mass balance techniques, 1035

Butler, F. E.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Bytnerowicz, A.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Cabrera, H.
California statewide assessment of the effects of ozone on crop productivity, 928

Cahaly, R.
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Calabrese, E. J.
Remedial options for leaking underground storage tanks, 428

Carlton, J. D.
Medium-sulfur coal and fly ash resistivity, 209

Carpenter, G.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Carruthers, A. R.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Cassidy, W. A.
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168

Cernansky, N. P.
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

Cha, S
Continuous measurement of diesel particulate emissions, 252

Chang, B.-H.
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Chang, J. C. S.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Churchill, R. J.
SARA Title III, Section 313—looking ahead, 1376

Cichanowicz, J. E.
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Cohen, B. L.
Variation of radon levels in U.S. homes with various factors, 129

Cohen, J.
EPRI newsletter, 124, 532, 994

Conner, J. M.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Conner, W. D.
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Cooper, J. A.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Coppedge, E. A.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Cox, B. G.
Sample design considerations for indoor air exposure surveys, 1266

Coy, D. W.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Crawford, W. A.
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Cullinan, V.
A collaborative effort to model plant response to acidic rain, 777

Currie, R. M.
SARA Title III, Section 313—looking ahead, 1376

Cushey, M. A.
Simplified models of U.S. acid rain control costs, 1523

Cushing, K. M.
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90

Davidson, C. I.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Davidson, S. A.
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Davies, J.
CEPA—the Canadian Environmental Protection Act, 1111

Davis, D. W.
Origins of manganese in air particulates in California, 1152

Dawson, P. J.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Dean, A. H.
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90

Deies, D. A.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

de Souza, T. L. C.
Sulphur gas analysis in the pulp and paper industry, 792

Dharmavaram, S.
A simple methodology for the determination of back trajectories, 812

Diemer, J. S.
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997

Dillworth, J. F.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Ding, M. G.
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185

Drabkin, M.
Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530

Drago, R. J.
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Drechsler-Parks, D. M.
Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Dresser, A. L.
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419

DuBard, J. L.
Medium-sulfur coal and fly ash resistivity, 209
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Dux, T. P.
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426

Dzubay, T. G.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Eden, R. W.
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Eheart, J. W.
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997

Elkins, C. L.
Emergency planning and community right-to-know, 243

Emmel, T. E.
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852

Engelgau, D.
Ash samples exceed toxicity limits EPA characterization study reports, 122
EPA plan would give cities up to eight years to attain ozone, CO standards, 72
Washington report, 4, 118, 232, 362, 524, 742, 872, 986, 1100, 1246, 1360

Erfani, G.
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Esplin, G. J.
Boundary layer emission monitoring, 1158

Evans, J. S.
The value of monitoring for radon in the home: a decision analysis, 1380

Fisher, P. W.
SARA Title III, Section 313—looking ahead, 1376

Fleischer, R. L.
Basement ventilation needed to lower indoor radon to acceptable levels, 914

Foecke, T. L.
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283

Folinsbee, L. J.
Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Fox, C. A.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Frame, G. B.
A comparison of air pollution control systems for municipal solid waste incinerators, 1081

Freeman, H. M.
Hazardous waste minimization: a strategy for environmental improvement, 59

Freeman, L. E.
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Garding, M.
Modeling of dry injection flue gas desulfurization, 1275

Garrett, T.
Plating and painting line modifications for a large vehicle repair operation, 1042

Geib, R. C.
Progress in measurement of vehicle exhaust components, 280

Giardino, N. J.
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Girovich, M. J.
3-D flow modeling of a hazardous waste incinerator, 1050

Golden, D.
Spray dryer waste management, 292

Gordon, G. E.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Graham, J. D.
The value of monitoring for radon in the home: a decision analysis, 1380

Green, C. R.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Greiner, G. P.
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Grimsrud, D. T.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Gromicko, N.
Variation of radon levels in U.S. homes with various factors, 129

Grot, R. A.
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Guertin, J. P.
Results of a receptor modeling feasibility study, 661

Hackney, J. D.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Haidinger, J.
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Halberstadt, M. L.
MVMA newsletter, 238, 747, 1482

Hanisch, J. L.
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Hanna, S. R.
Air quality model evaluation and uncertainty, 406

Harlos, D. P.
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

Harrison, W. A.
Medium-sulfur coal and fly ash resistivity, 209

Hart, R.
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Hartman, M. W.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Hasselblad, V.
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Hawkins, N. C.
The value of monitoring for radon in the home: a decision analysis, 1380

Hayward, S. B.
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Heavner, D. L.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Heck, W. W.
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497

Heggestad, H. E.
Reduction in soybean seed yields by ozone air pollution?, 1040

Henderson-Sellers, B.
Numerical simulations of plume rise, 46

Hlavinka, M. W.
Validation of mobile source emission estimates using mass balance techniques, 1035

Ho, M.-D.
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185

Hochheiser, S.
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259

Hollod, G. J.
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174

Hopke, P. K.
A simple methodology for the determination of back trajectories, 812

Hori, H.
Breakthrough time on activated carbon fluidized bed adsorbers, 269

Horstman, D. H.
Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Horvath, S. M.
Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Houck, J. E.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Hovis, L. S.
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573

Howe, G. B.
Evaluation of method 25 nonmethane organic analyzer design, 907

Hsiao, K.
Origins of manganese in air particulates in California, 1152

Hunt, G. E.
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672

Immerman, F. W.
Sample design considerations for indoor air exposure surveys, 1266

Ingebrethsen, B. J.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413
Ingels, R.
Origins of manganese in air particulates in California, 1152
Irving, P.
A collaborative effort to model plant response to acidic rain, 777
Irving, P. M.
Plan and schedule for NAPAP's 1989 and 1990 reports, 1489
Ishiguro, K.
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403
Jackson, M.
Evaluation of method 25 nonmethane organic analyzer design, 907
Jacobson, J.
A collaborative effort to model plant response to acidic rain, 777
Javitz, H. S.
Results of a receptor modeling feasibility study, 661
Jayanty, R. K. M.
Evaluation of method 25 nonmethane organic analyzer design, 907
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
Jensen, T. E.
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56
Johnson, P. M.
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
Jones, J. W.
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Joos, E.
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
Jorgensen, C.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Jozewicz, W.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027
Kaminski, J. A.
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Kats, G.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145
Khalil, M. A. K.
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901
King, F.
Continuous measurement of diesel particulate emissions, 252
Knapp, K. T.
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152
Knoll, J. E.
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Development of a method for determination of methylene chloride emissions at stationary sources, 272
Koenig, J. Q.
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51
Kostecki, P. T.
Remedial options for leaking underground storage tanks, 428
Krupa, S. V.
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
Kucharski, W. A.
Remedial options for leaking underground storage tanks, 428
Kuja, A.
A collaborative effort to model plant response to acidic rain, 777
Kusic, G.
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51
Larsen, R. I.
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
Laseke, B. A.
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Lawless, P. A.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
Lee, C. C.
A model analysis of metal partitioning in a hazardous waste incineration system, 941
Lee, J.
A collaborative effort to model plant response to acidic rain, 777
Lee, K. C.
Research areas for improved incineration system performance, 1542
Leemann, J. E.
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814
Lefohn, A. S.
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504
The computer corner, 6, 120, 236, 374, 530, 748, 874, 992, 1102, 1254, 1366
Lent, N. F.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Levin, M. H.
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
Lewis, D. A.
Hazardous waste minimization: part VIII. Waste minimization in the pesticide formulation industry, 1293
Lewtas, J.
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652
Linn, W. S.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258
Lioy, P. J.
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668
Lippmann, M.
Health significance of pulmonary function responses to airborne irritants, 881
Liu, C. S.
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418
Liu, K.-S.
A survey of nitrogen dioxide levels measured inside mobile homes, 647
Lorton, G. A.
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
McAlister, G. D.
Evaluation of method 25 nonmethane organic analyzer design, 907
McCartney, R. F.
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174
McClenny, W. A.
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006
McCurdy, T. R.
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
McDonnell, W. F.
Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28
McElhoe, H. B.
Alternative sampling methods to measure airborne particles, 1171
McIlvaine, R. W.
The air pollution control market in the 1990s, 248
McKenna, J. D.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
McLearn, M. E.
Remedial options for leaking underground storage tanks, 428
McManus, M. S.
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51
Maffiolo, G.
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
Mage, D. T.
Sample design considerations for indoor air exposure surveys, 1266
Mahoney, J. R.
Plan and schedule for NAPAP's 1989 and 1990 reports, 1489
Makris, J.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Makris, J. L.
Emergency planning and community right-to-know, 243
Malanchuk, J. L.
Plan and schedule for NAPAP's 1989 and 1990 reports, 1489
Marbury, M. C.
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392
March, D. J.
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426
Margeson, J. H.
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Maroney, P. M.
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Marple, V. A.
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668
Marrack, D.
Hospital red bag waste. An assessment and management recommendations, 1309
Marshall, C. R.
TE effects division environmental report, 372
Mason, M. A.
Organic emissions from consumer products and building materials to the indoor environment, 264
Mathai, C. V.
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
Medeiros, W. H.
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171

Merrill, R. G.
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Micheletti, W.
Managing low-volume wastes from fossil fuel fired power plants, 179

Midgett, M. R.
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Miller, M. J.
Remedial options for leaking underground storage tanks, 428

Mills, M. B.
Hazardous waste minimization in the manufacture of explosives, 1045

Morrison, C. L.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Morse, H. N.
Calcasieu Parish Police Jury v. Thompson, 517
Dickerson v. Administrator, Environmental Protection Agency, 1089
FMC Corporation v. Northern Pump Company, 979
In re applicability of ECRA to the Robert L. Mitchell Technical Center, 1353
In the matter of AlTech Specialty Steel Corporation v. New York State Department of Taxation and Finance, 735
In the matter of citizens for clean air vs. New York State Department of Environmental Conservation, 1467
In the matter of N J P D E S Permit No. N J 0055247, 355
In the matter of Shreveport Sanitary and Industrial Landfill, 1629
State of Arizona v. Lee M. Thomas, Administrator, U.S. Environmental Protection Agency, 865
State of Iowa, ex rel. Iowa Department of Water, Air and Waste Management v. Presto-X Company, 1239
Sunnen Products Company v. Chemtech Industries, Inc., 110
United States of America v. Ford Motor Company, 225

Moskowitz, P. D.
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171

Mueller, P. K.
Results of a receptor modeling feasibility study, 661

Mulholland, J. A.
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162

Mulligan, J. L.
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Muylle, E.
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Newman, J. T.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334

Nicholson, J. K.
Medium-sulfur coal and fly ash resistivity, 209

Nizami, A. A.
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

Noll, K. E.
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512

Oden, N.
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171

Oliver, K. D.
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006

Olmez, I.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Olszyk, D. M.
California statewide assessment of the effects of ozone on crop productivity, 928
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Oman, D. E.
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932

O'Shea, W. J.
A chemical mass balance for volatile organics in Chicago, 1020

Pau, J. C.
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528

Paul, J.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Penney, G. W.
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168

Pennline, H. W.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334

Perrigan, S.
A collaborative effort to model plant response to acidic rain, 777

Perry, E.
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Peterson, D. L.
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921

Petreas, M.
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Pielke, R. A.
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Pierson, W. E.
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Pinkerton, J. E.
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504

Pitcher, H.
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Pleil, J. D.
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006

Pollard, T.
Plating and painting line modifications for a large vehicle repair operation, 1042

Pontius, D. H.
Method for computing flow distribution and pressure drop in multichambered baghouses, 39

Portier, K. M.
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Powell, J.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Preslo, L. M.
Remedial options for leaking underground storage tanks, 428

Prill, R. J.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Prindiville, S.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Pritchett, L. C.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Quesnel, R.
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36

Rasmussen, R. A.
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901

Reisenauer, C. S.
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Richards, L. W.
Sight path measurements for visibility monitoring and research, 784

Riley, C. E.
Evaluation of method 25 nonmethane organic analyzer design, 907

Rubin, E. S.
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Simplified models of U.S. acid rain control costs, 1523

Ruby, M.
Low cost software—VI, 690

Ryan, P. B.
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Samet, J. M.
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

Samson, P. J.
Comment on "a simple methodology for the determination of back trajectories", 1290

Sarlis, J. N.
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512

Scheff, P. A.
A chemical mass balance for volatile organics in Chicago, 1020

Schere, K. L.
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Schwartz, J.
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Sedman, C. B.
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Segal, M.
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Seinfeld, J. H.
Ozone air quality models: a critical review, 616

Sexton, K.
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Sheffield, A. E.
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Shikiya, J.
Origins of manganese in air particulates in California, 1152

Shriner, D.
A collaborative effort to model plant response to acidic rain, 777

Silberstein, S.
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Skea, J. F.
Optimization of coal beneficiation plants for SO_2 emissions control, 1281

Skinner, J. H.
Municipal waste combustion ash, 1486
The Environmental Protection Agency's hazardous waste research and development program, 377

Smith, J. C.
IGCI newsletter, 8, 366, 878, 1252

Smith, M. S.
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Smith, W. B.
Method for computing flow distribution and pressure drop in multichambered baghouses, 39

Soczek, M. L.
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Sokol, C. K.
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Solyst, J.
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Sowell, D. A.
Hazardous waste minimization of abrasive blast media: addressing corrosion control and environmental risks, 1048

Sparks, L. E.
Medium-sulfur coal and fly ash resistivity, 209
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Spengler, J. D.
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Srivastava, R. K.
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162

Steger, J. L.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Steichen, T. J.
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Stelson, A. W.
Water interference of pulsed fluorescence SO_2 monitor, 420

Stonefield, D. H.
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888

Stough, B.
Waste exchanges: catalysts for innovation in waste minimization, 744

Stunder, B. J. B.
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Suggs, J. C.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Suyama, W.
Remedial options for leaking underground storage tanks, 428

Svedberg, G.
Modeling of dry injection flue gas desulfurization, 1275

Sykes, A. L.
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Tanaka, I.
Breakthrough time on activated carbon fluidized bed adsorbers, 269

Thomas, L. M.
Managing municipla solid waste, 750

Thomas, P. F.
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36

Thompson, C. R.
California statewide assessment of the effects of ozone on crop productivity, 928

Tice, J. H.
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334

Tichenor, B. A.
Organic emissions from consumer products and building materials to the indoor environment, 264

Tidona, R. J.
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

Toy, W. M.
Hazardous waste minimization: part IX. Waste minimization in the automotive repair industry, 1422

Traynor, G. W.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Troiana, J.
A collaborative effort to model plant response to acidic rain, 777

Turk, B. H.
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Turner, J. H.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Turner, W.
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

Vanderstraeten, P.
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Vansant, E. F.
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Vatavuk, W. M.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Verderheyden, E.
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Verduyn, G.
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Viner, A. S.
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573

Von Lehmden, D. J.
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Wadley, M. W.
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Wainman, T.
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

Watson, J. G., Jr.
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
Results of a receptor modeling feasibility study, 661

Watts, R. R.
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Wauters, E.
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Webb, P. G.
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Whynot, J. D.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Wightman, L. H.
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Williams, J. D.
3-D flow modeling of a hazardous waste incinerator, 1050

Williams, R. S.
Effect of dilute acid on the accelerated weathering of wood, 148

Williams, R. W.
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Witkowski, R. E.
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168

Witz, S.
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Wolf, J.
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Wolf, K.
Source reduction and the waste management hierarchy, 681

Wolff, G. T.
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Yamamoto, T.
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Young, A. D., Jr.
Underground storage tanks: management's latest challenge, 62

Young, R. P.
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Young, W.
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Yu, C.-H.
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Zaczek, S. J.
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

SUBJECT INDEX

Abrasive Blasting
Hazardous waste minimization of abrasive blast media: addressing corrosion control and environmental risks, 1048
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Absorption
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418
Accidental Releases
Emergency planning and community right-to-know, 243
Accountability
Hospital red bag waste. An assessment and management recommendations, 1309
Accuracy
Evaluation of method 25 nonmethane organic analyzer design, 907
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823
Acid Precipitation
See also Deposition
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
A collaborative effort to model plant response to acidic rain, 777
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Effect of dilute acid on the accelerated weathering of wood, 148
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Plan and schedule for NAPAP's 1989 and 1990 reports, 1489
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258
Simplified models of U.S. acid rain control costs, 1523
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171
Acids
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283
Activated Carbon
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512
Breakthrough time on activated carbon fluidized bed adsorbers, 269
Adsorption
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512
Breakthrough time on activated carbon fluidized bed adsorbers, 269
Aerosol
See also Particulates
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418
Age Effects
Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016
Agencies
1988 APCA Government Agencies Directory, 479
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297
Agricultural Aspects
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
Hazardous waste minimization: part VIII. Waste minimization in the pesticide formulation industry, 1293
Reduction in soybean seed yields by ozone air pollution?, 1040
Air and Waste Management Association
See also APCA
Bylaw amendments to change the name of the association are proposed for your consideration and response, 703
Airborne Pollutants
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386
Air Exchange Rate
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011
Air Particulates
See also Particulates, Aerosol
Origins of manganese in air particulates in California, 1152
Air Pollution Control
The air pollution control market in the 1990s, 248
Air Pollution Control Association
See APCA; and Air and Waste Management Association
Air Pollution Control Devices
Research areas for improved incineration system performance, 1542
Air Quality Data Analysis
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
Air Toxics
See Toxic Air Pollutants
Air Toxics Programs
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
Albuquerque, New Mexico
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392
Alkaline Permanganate
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Alternative Technologies
Remedial options for leaking underground storage tanks, 428
Source reduction and the waste management hierarchy, 681
The Environmental Protection Agency's hazardous waste research and development program, 377
Ambient Air
A chemical mass balance for volatile organics in Chicago, 1020
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652
Ambient Monitoring Data
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504
Antarctica
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168
APCA
See also Air and Waste Management Association
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
1988 APCA Government Agencies Directory, 479
Bylaw amendments to change the name of the association are proposed for your consideration and response, 703
Guide to the 81st APCA Annual Meeting and Exhibition, 539
Hazardous waste minimization: a strategy for environmental improvement, 59
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
Area Sources
Boundary layer emission monitoring, 1158
Army
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Plating and painting line modifications for a large vehicle repair operation, 1042
Aromatic Compounds
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56
Assessment
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504
SARA Title III, Section 313—looking ahead, 1376
Asthma
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258
Atmospheric Chemistry
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
Atmospheric Fluidized-Bed Combustion
ESP performance with atmospheric fluidized-bed combustion, 1455
Atmospheric Optics
Sight path measurements for visibility monitoring and research, 784
Atmospheric Releases
SARA Title III, Section 313—looking ahead, 1376
Attainment
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Author's Guide
JAPCA editorial policy and author's guide to manuscript preparation, 111
Automation
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
Automotive Emissions
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901
Continuous measurement of diesel particulate emissions, 252
Progress in measurement of vehicle exhaust components, 280
Automotive Industry
Hazardous waste minimization: part IX. Waste minimization in the automotive repair industry, 1422
Background
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
Back Trajectories
A simple methodology for the determination of back trajectories, 812
Comment on "a simple methodology for the determination of back trajectories", 1290
Baghouses
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Method for computing flow distribution and pressure drop in multichambered baghouses, 39
Balloon Sampling
Boundary layer emission monitoring, 1158

Benzene Emissions
Breakthrough time on activated carbon fluidized bed adsorbers, 269
EPA proposes four policy approaches for controlling benzene emissions, 1196
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528
Benzo(a)pyrene
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56
Bioassay
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652
Biodegradation
Remedial options for leaking underground storage tanks, 428
Biomedical Waste
Hospital red bag waste. An assessment and management recommendations, 1309
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297
Boston, Massachusetts
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22
Boundary Layer
Boundary layer emission monitoring, 1158
Breakthrough Time
Breakthrough time on activated carbon fluidized bed adsorbers, 269
Bubble Theory
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997
Building Materials
Effect of dilute acid on the accelerated weathering of wood, 148
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
Organic emissions from consumer products and building materials to the indoor environment, 264
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403
California
A survey of nitrogen dioxide levels measured inside mobile homes, 647
California statewide assessment of the effects of ozone on crop productivity, 928
Origins of manganese in air particulates in California, 1152
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418
Canada
1988 APCA Government Agencies Directory, 479
CEPA—the Canadian Environmental Protection Act, 1111
Canadian Environmental Protection Act
CEPA—the Canadian Environmental Protection Act, 1111
Cancer
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386
The value of monitoring for radon in the home: a decision analysis, 1380
Carbon Compounds
Continuous measurement of diesel particulate emissions, 252
Carbon Dioxide
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Carbon Monoxide
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901
EPA plan would give cities up to eight years to attain ozone, CO standards, 72
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Carcinogenic Compounds
Management of carcinogenic air emissions: a case study of a power plant, 15
Case Studies
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672
Management of carcinogenic air emissions: a case study of a power plant, 15
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917
Chamber Study
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413
Chemical Industry
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174
U.S. chemical plants continuing trend toward reducing hazardous waste generation, 988
Chemical Mass Balance
A chemical mass balance for volatile organics in Chicago, 1020
Chemiluminescent Measurement
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806
Chemometrics
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
Chicago, Illinois
A chemical mass balance for volatile organics in Chicago, 1020
Chlorofluorocarbon Refrigerants
New method shows promise in tracing industrial emissions to their sources, 1058
Chromatography
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Class I Areas
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144
Clean Coal Technologies
DOE "repowering" report cities benefits possible from clean coal technologies, 186
Coal
Medium-sulfur coal and fly ash resistivity, 209
Coal Beneficiation
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Coal Burning
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386
Coal Cleaning
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Coal Combustion
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152
Coal-Fired Boilers
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90
Coal Fired Power Plants
ESP performance with atmospheric fluidized-bed combustion, 1455
New method shows promise in tracing industrial emissions to their sources, 1058
Simplified models of U.S. acid rain control costs, 1523
Codisposal
Managing low-volume wastes from fossil fuel fired power plants, 179
Collection Efficiency
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Combustion
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806
Comparison
A comparison of air pollution control systems for municipal solid waste incinerators, 1081
Compliance
Hazardous waste minimization: part IX. Waste minimization in the automotive repair industry, 1422
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
Computer Applications
See also Microcomputers
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Comment on "a simple methodology for the determination of back trajectories", 1290
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185
Indoor air pollution source database, 670
Numerical simulations of plume rise, 46
Conferences
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
Guide to the 81st APCA Annual Meeting and Exhibition, 539
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
Conservation
New method shows promise in tracing industrial emissions to their sources, 1058
Consumer Products
Organic emissions from consumer products and building materials to the indoor environment, 264
Continuous Monitoring
Continuous measurement of diesel particulate emissions, 252
Sulphur gas analysis in the pulp and paper industry, 792
Control Strategies
Hazardous waste minimization: a strategy for environmental improvement, 59
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
The value of monitoring for radon in the home: a decision analysis, 1380
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997
Control Technology Department
A comparison of air pollution control systems for municipal solid waste incinerators, 1081
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Medium-sulfur coal and fly ash resistivity, 209
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Sizing and costing of eiectrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90
The Environmental Protection Agency's hazardous waste research and development program, 377
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Corrosion
Hazardous waste minimization of abrasive blast media: addressing corrosion control and environmental risks, 1048
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Underground storage tanks: management's latest challenge, 62

Cosmic Dust
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168

Cost Analysis
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Simplified models of U.S. acid rain control costs, 1523
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
Spray dryer waste management, 292
TE effects division environmental report, 372
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Coulometric Analyzers
Sulphur gas analysis in the pulp and paper industry, 792

Critical Review
Ozone air quality models: a critical review, 616

Crop Reduction
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
California statewide assessment of the effects of ozone on crop productivity, 928
Reduction in soybean seed yields by ozone air pollution?, 1040

Data Base
Indoor air pollution source database, 670

Data Collection
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392
SARA Title III, Section 313—looking ahead, 1376

Debye's Theory
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Defense Department
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174

Demonstrations
The Environmental Protection Agency's hazardous waste research and development program, 377

Deposition
See also Acid Precipitation
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171

Design
3-D flow modeling of a hazardous waste incinerator, 1050
Evaluation of method 25 nonmethane organic analyzer design, 907
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168

Desorption
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512

Detection Methods
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006

Dichotomous Sampler
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm: cut size, 668

Dielectric Measurements
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Diesel Fuel
Continuous measurement of diesel particulate emissions, 252
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Dilution
Water interference of pulsed fluorescence SO_2 monitor, 420

Disclosure
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371

Dispersion Modeling
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
Numerical simulations of plume rise, 46

Disposal
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814

Dose-Response Relationship
A collaborative effort to model plant response to acidic rain, 777
Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Dry injection
Modeling of dry injection flue gas desulfurization, 1275
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Dry Sulfur Dioxide Removal
Simplified models of U.S. acid rain control costs, 1523

Dust
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Dust Cake
Method for computing flow distribution and pressure drop in multichambered baghouses, 39
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412

Dust Collection
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573

Dust Layers
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Economic Aspects
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174
Simplified models of U.S. acid rain control costs, 1523
The value of monitoring for radon in the home: a decision analysis, 1380

Economic Incentives
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814

Editorial Policy
JAPCA editorial policy and author's guide to manuscript preparation, 111

Electrical Breakdown
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Electric Power Research Institute
Results of a receptor modeling feasibility study, 661
Spray dryer waste management, 292

Electric Utilities
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573
ESP performance with atmospheric fluidized-bed combustion, 1455

Electron Capture Detection
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006

Electronics Products
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283

Electroplating
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672

Electrostatic Precipitation
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
ESP performance with atmospheric fluidized-bed combustion, 1455
Medium-sulfur coal and fly ash resistivity, 209
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152
Simplified models of U.S. acid rain control costs, 1523
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
The design and deployment of an ESP atmospheric particle collector at the South Pole clean air facility, 1168
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412

Emergency Planning
Emergency planning and community right-to-know, 243

Emission Control
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Simplified models of U.S. acid rain control costs, 1523

Emission Estimates
Validation of mobile source emission estimates using mass balance techniques, 1035

Emission Factors
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901

Emission Inventories
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888

Emission Monitoring
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528

Emission Reduction Strategies
Plan and schedule for NAPAP's 1989 and 1990 reports, 1489

Emissions
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
ESP performance with atmospheric fluidized-bed combustion, 1455
New method shows promise in tracing industrial emissions to their sources, 1058

Emissions Trading
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997
Empirical Kinetic Modeling Approach
Ozone air quality models: a critical review, 616
Energy Conservation
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011
Environmental Protection Agency
Air quality model evaluation and uncertainty, 406
EPA finds insufficient hazard for added regulation of petroleum wastes, 234
EPA proposes to retain existing NAAQS for SO_2 but seeks comments on short-term standard, 832
EPA reports considerable progress in FY 1987 in uncontrolled hazardous waste site cleanup, 364
EPA/TACB study reveals Dallas affected by both "brown cloud" and regional haze, 692
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185
Hazardous waste minimization: a strategy for environmental improvement, 59
Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530
Municipal waste combustion ash, 1486
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
The Environmental Protection Agency's hazardous waste research and development program, 377
U.S. air quality shows continued improvement according to EPA 1977–1986 trends report, 438
Epidemiology
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158
Health significance of pulmonary function responses to airborne irritants, 881
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917
Equilibrium Radiance
Sight path measurements for visibility monitoring and research, 784
Equipment
Evaluation of method 25 nonmethane organic analyzer design, 907
Product Guide/1988, 341
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
The air pollution control market in the 1990s, 248
Erosion
Effect of dilute acid on the accelerated weathering of wood, 148
Evaluation
Evaluation of method 25 nonmethane organic analyzer design, 907
Excavation
Remedial options for leaking underground storage tanks, 428
Exercise
Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28
Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258
Explosives
Hazardous waste minimization in the manufacture of explosives, 1045
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Exposure Levels
The value of monitoring for radon in the home: a decision analysis, 1380
Fabric Filters
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Method for computing flow distribution and pressure drop in multichambered baghouses, 39
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90
Feasibility Study
Results of a receptor modeling feasibility study, 661
Federal Regulations
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
Field Studies
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171
Field Testing
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185
Filtration
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418
Fine Particulates
Research areas for improved incineration system performance, 1542
Flame Destruction
Research areas for improved incineration system performance, 1542
Flame Ionization
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006
Continuous measurement of diesel particulate emissions, 252
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528
Florida
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917
Flow Modeling
3-D flow modeling of a hazardous waste incinerator, 1050
Flue Gas
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027
Water interference of pulsed fluorescence SO_2 monitor, 420
Flue Gas Desulfurization
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932
Managing low-volume wastes from fossil fuel fired power plants, 179
Modeling of dry injection flue gas desulfurization, 1275
Simplified models of U.S. acid rain control costs, 1523
The air pollution control market in the 1990s, 248
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969
Fluidized Bed
Breakthrough time on activated carbon fluidized bed adsorbers, 269
Fly Ash
A model analysis of metal partitioning in a hazardous waste incineration system, 941
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
ESP performance with atmospheric fluidized-bed combustion, 1455
Medium-sulfur coal and fly ash resistivity, 209
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027
Fog
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258
Forests
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504
Formaldehyde
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403
Fossil Fuels
Managing low-volume wastes from fossil fuel fired power plants, 179
Foundries
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932
France
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
Fuel Additives
Continuous measurement of diesel particulate emissions, 252
Fuel Conversion
Research areas for improved incineration system performance, 1542
Fuel Oil
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162
Fugitive Dust
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135
Fumigation
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144
Gas Analysis
Sulphur gas analysis in the pulp and paper industry, 792
Gas Appliances
A survey of nitrogen dioxide levels measured inside mobile homes, 647
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011
Gas Chromatography
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528
Sulphur gas analysis in the pulp and paper industry, 792
Gaseous Pollutants
Breakthrough time on activated carbon fluidized bed adsorbers, 269
Progress in measurement of vehicle exhaust components, 230
Gas Flow
Method for computing flow distribution and pressure drop in multichambered baghouses, 39
Gasoline Marketing
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814
Grid-Based Models
Ozone air quality models: a critical review, 616
Groundwater
Remedial options for leaking underground storage tanks, 428
Underground storage tanks: management's latest challenge, 62
Growing Season
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504

Halogen
Research areas for improved incineration system performance, 1542

Hazardous Materials
Center for hazardous materials research recommends 7 steps for waste reduction, 876

Hazardous Organic Solvents
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512

Hazardous Organic Vapors
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512

Hazardous Waste
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426

Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259

U.S. chemical plants continuing trend toward reducing hazardous waste generation, 988

Hazardous Waste, Air Emissions From
A comparison of air pollution control systems for municipal solid waste incinerators, 1081

Boundary layer emission monitoring, 1158

Hazardous Waste Control
Hazardous waste minimization: part IX. Waste minimization in the automotive repair industry, 1422

Hazardous Waste Management
See Waste Management

Hazardous Waste News Department
See Waste Management News Department

Haze
EPA/TACB study reveals Dallas affected by both "brown cloud" and regional haze, 692

Health Effects
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Health significance of pulmonary function responses to airborne irritants, 881

Including uncertainty in assessments of sulfur oxide health risks, 399

Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Sample design considerations for indoor air exposure surveys, 1266

Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

The value of monitoring for radon in the home: a decision analysis, 1380

Health Risk
See Risk Assessment, Risk Management

Hospital Waste
Hospital red bag waste. An assessment and management recommendations, 1309

Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Human Health
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766

Human Studies
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Hydration
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Hydrocarbons
Progress in measurement of vehicle exhaust components, 280

Hydrothermal Reaction
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Illinois
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997

Impactors
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

Incineration
A comparison of air pollution control systems for municipal solid waste incinerators, 1081

A model analysis of metal partitioning in a hazardous waste incineration system, 941

3-D flow modeling of a hazardous waste incinerator, 1050

Hazardous waste minimization: a strategy for environmental improvement, 59

Hospital red bag waste. An assessment and management recommendations, 1309

Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Low NO_x, high efficiency multistaged burner: fuel oil results, 1162

Research areas for improved incineration system performance, 1542

Special task force prepares resource document on hazardous waste incineration, 526

The Environmental Protection Agency's hazardous waste research and development program, 377

Indoor Air Quality
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

A survey of nitrogen dioxide levels measured inside mobile homes, 647

Basement ventilation needed to lower indoor radon to acceptable levels, 914

Indoor air pollution source database, 670

Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

NRC Committee provides new risk estimates for exposure to radon, 298

Organic emissions from consumer products and building materials to the indoor environment, 264

Sample design considerations for indoor air exposure surveys, 1266

Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259

The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Variation of radon levels in U.S. homes with various factors, 129

Indoor-Outdoor Relationship
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

Indoor Pollutants
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Industrial Boilers
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162

Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90

Industrialization
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

The air pollution control market in the 1990s, 248

Industrial Sources
A simple methodology for the determination of back trajectories, 812

Comment on "a simple methodology for the determination of back trajectories", 1290

Infiltration
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Insight Editorial Department
Managing municipla solid waste, 750
Municipal waste combustion ash, 1486

Inspection and Maintenance
Progress in measurement of vehicle exhaust components, 280

Instrumentation
Product Guide/1988, 341
Sulphur gas analysis in the pulp and paper industry, 792
Water interference of pulsed fluorescence SO_2 monitor, 420

Insulation
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Integrated Environmental Controls
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Intercomparison
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

Interference Effects
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

International Aspects
The Environmental Protection Agency's hazardous waste research and development program, 377

International Joint Commission
1988 APCA Government Agencies Directory, 479

Juneau, Alaska
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Kinetics
Modeling of dry injection flue gas desulfurization, 1275

Laboratory Studies
A collaborative effort to model plant response to acidic rain, 777

Development of a method for determination of methylene chloride emissions at stationary sources, 272

Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Lagoons
Boundary layer emission monitoring, 1158

Lakes
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766

Land Disposal
Hazardous waste minimization: a strategy for environmental improvement, 59

Landfills
EPA proposes new standards for municipal solid waste disposal landfills, 1248

Land Treatment
Remedial options for leaking underground storage tanks, 428

Leaching
A model analysis of metal partitioning in a hazardous waste incineration system, 941

Remedial options for leaking underground storage tanks, 428

Lead
Origins of manganese in air particulates in California, 1152

Legal Briefs Department
Calcasieu Parish Police Jury v. Thompson, 517

Dickerson v. Administrator, Environmental Protection Agency, 1089

FMC Corporation v. Northern Pump Company, 979

In re applicability of ECRA to the Robert L. Mitchell Technical Center, 1353

In the matter of AlTech Specialty Steel Corporation v. New York State Department of Taxation and Finance, 735

In the matter of citizens for clean air vs. New York State Department of Environmental Conservation, 1467

In the matter of N J P D E S Permit No. N J 0055247, 355
In the matter of Shreveport Sanitary and Industrial Landfill, 1629
State of Arizona v. Lee M. Thomas, Administrator, U.S. Environmental Protection Agency, 865
State of Iowa, ex rel. Iowa Department of Water, Air and Waste Management v. Presto-X Company, 1239
Sunnen Products Company v. Chemtech Industries, Inc., 110
United States of America v. Ford Motor Company, 225

Legislation
CEPA—the Canadian Environmental Protection Act, 1111

Liability
GAO issues report to Congress on hazardous waste insurance availability, 10

Lichens
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Light Attenuation
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Light Extinction
Results of a receptor modeling feasibility study, 661

Light Scattering
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413

Lime
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Lime Slurry
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334

Lime Sorbents
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027

Liquid Wastes
Underground storage tanks: management's latest challenge, 62

Literature Review
Ozone air quality models: a critical review, 616

Local Field Enhancement
The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Los Angeles
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Low-Volume Wastes
Managing low-volume wastes from fossil fuel fired power plants, 179

Lung Cancer
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Mail-Out Survey
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Management Decisions
Source reduction and the waste management hierarchy, 681

Management Practices
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814

Manganese
Origins of manganese in air particulates in California, 1152

Manufacturing
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174

Market Trends
The air pollution control market in the 1990s, 248

Massachusetts
Management of carcinogenic air emissions: a case study of a power plant, 15

Mass Balance
Validation of mobile source emission estimates using mass balance techniques, 1035

Mass Concentration
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Material Effects
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283

Mathematical Analysis
Numerical simulations of plume rise, 46

Measurement
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823
Progress in measurement of vehicle exhaust components, 280

Mercaptans
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Metal Finishing
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Plating and painting line modifications for a large vehicle repair operation, 1042

Metal Partitioning
A model analysis of metal partitioning in a hazardous waste incineration system, 941

Metals
A model analysis of metal partitioning in a hazardous waste incineration system, 941
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932

Meteorology
A simple methodology for the determination of back trajectories, 812
Comment on "a simple methodology for the determination of back trajectories", 1290
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163
Ozone air quality models: a critical review, 616

Methodology
A simple methodology for the determination of back trajectories, 812
Comment on "a simple methodology for the determination of back trajectories", 1290
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Methylene Chloride
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Microcomputers
See also Computer Applications
Indoor air pollution source database, 670
Numerical simulations of plume rise, 46
The computer corner, 6, 120, 236, 374, 530, 748, 874, 992, 1102, 1254, 1366, 1476

Microcomputer Software Reviews
ADC-1, 1435
ADSORB, 307
AERO, 445
AP42-4, 70
BREEZE AIR, 185
DEGADIS+, 1194
ENGINEERING ECONOMIC ANALYSIS, 1056
Low cost software—VI, 690
PRODESIGN II, 831
PTPLU&ISC-SCR, 948
SuperProject Plus, 1552

Migration
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Military Specifications
Source reduction and the waste management hierarchy, 681

Mobile Homes
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Mobile Incinerator
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185

Mobile Sources
Continuous measurement of diesel particulate emissions, 252
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Validation of mobile source emission estimates using mass balance techniques, 1035

Mobile Systems
The Environmental Protection Agency's hazardous waste research and development program, 377

Model Application
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901

Model Evaluation
Air quality model evaluation and uncertainty, 406
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163
Ozone air quality models: a critical review, 616

Modeling
A collaborative effort to model plant response to acidic rain, 777
A model analysis of metal partitioning in a hazardous waste incineration system, 941
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185
Method for computing flow distribution and pressure drop in multichambered baghouses, 39
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163
Modeling of dry injection flue gas desulfurization, 1275
Numerical simulations of plume rise, 46
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Ozone air quality models: a critical review, 616
Simplified models of U.S. acid rain control costs, 1523
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Model Validation
Validation of mobile source emission estimates using mass balance techniques, 1035

Monitoring
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
Boundary layer emission monitoring, 1158
The value of monitoring for radon in the home: a decision analysis, 1380
Water interference of pulsed fluorescence SO_2 monitor, 420

Morbidity
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158
Including uncertainty in assessments of sulfur oxide health risks, 399

Mortality
Including uncertainty in assessments of sulfur oxide health risks, 399
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Multimedia, Effects
CEPA—the Canadian Environmental Protection Act, 1111

Municipal Solid Waste
A comparison of air pollution control systems for municipal solid waste incinerators, 1081
EPA proposes new standards for municipal solid waste disposal landfills, 1248
Managing municipla solid waste, 750
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Mutagenicity
Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56
Management of carcinogenic air emissions: a case study of a power plant, 15
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

National Acid Precipitation Assessment Program
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
Alternative sampling methods to measure airborne particles, 1171

Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852

Plan and schedule for NAPAP's 1989 and 1990 reports, 1489

National Ambient Air Quality Standard
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

National Parks
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Navy
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174

Neutralization
Managing low-volume wastes from fossil fuel fired power plants, 179

News Focus Department
Congressional moratorium ends on Clean Air Act noncompliance sanctions, 1314

DOE "repowering" report cites benefits possible from clean coal technologies, 186

EPA issues draft report on potential effects of global warming on the U.S., 1554

EPA plan would give cities up to eight years to attain ozone, CO standards, 72

EPA proposes four policy approaches for controlling benzene emissions, 1196

EPA proposes to retain existing NAAQS for SO_2 but seeks comments on short-term standard, 832

EPA/TACB study reveals Dallas affected by both "brown cloud" and regional haze, 692

New method shows promise in tracing industrial emissions to their sources, 1058

NRC Committee provides new risk estimates for exposure to radon, 298

Thomas calls stratospheric ozone depletion rate "alarming;" urges CFC, halon phaseout, 1436

U.S. air quality shows continued improvement according to EPA 1977–1986 trends report, 438

Newsletter
EPRI newsletter, 124, 532, 994

IGCI newsletter, 8, 366, 878, 1252

MVMA newsletter, 238, 747, 1108, 1482

TE effects division environmental report, 372

Washington report, 4, 118, 232, 362, 524, 742, 872, 986, 1100, 1246, 1360, 1474

New Source Performance Standards
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Nitric Acid
Effect of dilute acid on the accelerated weathering of wood, 148

Nitrogen Dioxide
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

A survey of nitrogen dioxide levels measured inside mobile homes, 647

Health significance of pulmonary function responses to airborne irritants, 881

Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Nitrogen Oxides
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36

ESP performance with atmospheric fluidized-bed combustion, 1455

Low NO_x, high efficiency multistaged burner: fuel oil results, 1162

Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

Nonmethane Organic Compounds
A chemical mass balance for volatile organics in Chicago, 1020

Evaluation of method 25 nonmethane organic analyzer design, 907

Occupational Exposure
Breakthrough time on activated carbon fluidized bed adsorbers, 269

Ocean Incineration
EPA marine protection report for 1984–86 documents state of ocean incineration, 1104

Odors
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Oil Fired Boilers
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162

Opacity
Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Optical Properties
Sight path measurements for visibility monitoring and research, 784

Optimization
Optimization of coal beneficiation plants for SO_2 emissions control, 1281

Organic Compound Destruction
Research areas for improved incineration system performance, 1542

Organics
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271

Continuous measurement of diesel particulate emissions, 252

Organic emissions from consumer products and building materials to the indoor environment, 264

Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Organic Speciation
Ozone air quality models: a critical review, 616

Oxidants
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158

Ozone
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497

An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921

California statewide assessment of the effects of ozone on crop productivity, 928

Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36

EPA plan would give cities up to eight years to attain ozone, CO standards, 72

Health significance of pulmonary function responses to airborne irritants, 881

High resolution characterization of ozone data for sites located in forested areas of the United States, 1504

Ozone air quality models: a critical review, 616

Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Reduction in soybean seed yields by ozone air pollution?, 1040

Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Ozone Concentration
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497

Ozone Exposure
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504

Paint
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422

Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672

Painting
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174

Plating and painting line modifications for a large vehicle repair operation, 1042

Particle Characterization
Results of a receptor modeling feasibility study, 661

Particle Charging
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458

Particle Clearance
Health significance of pulmonary function responses to airborne irritants, 881

Particle Composition
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Particle Size Distribution
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Particulate Control Equipment
ESP performance with atmospheric fluidized-bed combustion, 1455

Particulates
See also Aerosol, PM-10

A dispersion and receptor model analysis of a western community's PM-10 problem, 1419

Alternative sampling methods to measure airborne particles, 1171

A model analysis of metal partitioning in a hazardous waste incineration system, 941

An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Continuous measurement of diesel particulate emissions, 252

Direct-acting mutagenicity of diesel particulate extract is unchanged by addition of neat aromatic compounds to diesel fuel, 56

Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458

Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715

Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Paschen's Law
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412

The onset of electrical breakdown in dust layers: II. Effective dielectric constant and local field enhancement, 1518

Passive Sampling
Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

Passive Smoking
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Pennsylvania
Center for hazardous materials research recommends 7 steps for waste reduction, 876

Performance
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852

Performance Audit
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Permitting
Calcasieu Parish Police Jury v. Thompson, 517

Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997

Personal Monitoring
Sample design considerations for indoor air exposure surveys, 1266

Pesticides
Hazardous waste minimization: part VIII. Waste minimization in the pesticide formulation industry, 1293

Petroleum
EPA finds insufficient hazard for added regulation of petroleum wastes, 234

Petroleum Industry
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814

Photochemical Pollutants
Ozone air quality models: a critical review, 616

Photosynthesis
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Pilot Plants
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573

Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222

Pilot Studies
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796

Modeling of dry injection flue gas desulfurization, 1275

Plant Response
A collaborative effort to model plant response to acidic rain, 777

Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Plate Geometry
The onset of electrical breakdown in dust layers: I. Microsparking described by Paschen's Law, 1412

Plating
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174

Plating and painting line modifications for a large vehicle repair operation, 1042

Plating Bath
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283

Plume Rise
Numerical simulations of plume rise, 46

Plumes
A simple methodology for the determination of back trajectories, 812

Comment on "a simple methodology for the determination of back trajectories", 1290

Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36

PM-10
See also Particulates

A dispersion and receptor model analysis of a western community's PM-10 problem, 1419

An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668

PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888

Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Policy
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Polyvinyl Chloride
Hospital red bag waste. An assessment and management recommendations, 1309

Power Plants
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36

Management of carcinogenic air emissions: a case study of a power plant, 15

Managing low-volume wastes from fossil fuel fired power plants, 179

Medium-sulfur coal and fly ash resistivity, 209

Relationship between the mass concentration and light attenuation of particulate emissions from coal-fired power plants, 152

Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997

Precision
Evaluation of method 25 nonmethane organic analyzer design, 907

Pressed Wood Products
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Pressure Drop
Method for computing flow distribution and pressure drop in multichambered baghouses, 39

Principal Organic Hazardous Constituents
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Process Chemistry
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969

Process Control
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932

Process Modification
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814

Product Guide
Product Guide/1988, 341

Public Information
Emergency planning and community right-to-know, 243

Public Safety
Underground storage tanks: management's latest challenge, 62

Pulmonary Function
Health significance of pulmonary function responses to airborne irritants, 881

Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Pulmonary response to ozone exposures in healthy individuals aged 55 years or greater, 51

Reproducibility of the pulmonary function response of older men and women to a 2-hr ozone exposure, 1016

Pulp and Paper Industry
Sulphur gas analysis in the pulp and paper industry, 792

Pulse-Jet Cleaning
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90

Pulverized Coal Fired Boilers
ESP performance with atmospheric fluidized-bed combustion, 1455

Quality Control
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426

Quenching
Reducing interference effects in the chemiluminescent measurement of nitric oxides from combustion systems, 806

Radon
Basement ventilation needed to lower indoor radon to acceptable levels, 914

NRC Committee provides new risk estimates for exposure to radon, 298

On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Sample design considerations for indoor air exposure surveys, 1266

The value of monitoring for radon in the home: a decision analysis, 1380

Variation of radon levels in U.S. homes with various factors, 129

Reactive Organic Gases
Ozone air quality models: a critical review, 616

Receptor Modeling
A chemical mass balance for volatile organics in Chicago, 1020

A dispersion and receptor model analysis of a western community's PM-10 problem, 1419

Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901

Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392

Results of a receptor modeling feasibility study, 661

Recycling
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283

Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422

Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932

Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530

New method shows promise in tracing industrial emissions to their sources, 1058

Red Bag Waste
Hospital red bag waste. An assessment and management recommendations, 1309

Reference Methods
Development of a method for determination of methylene chloride emissions at stationary sources, 272

Evaluation of method 25 nonmethane organic analyzer design, 907

Regression Analysis
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

Regulation
CEPA—the Canadian Environmental Protection Act, 1111

State and Federal air toxics developments: disclosure strategies overtake regulation, 1371

Regulatory Issues
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297

Regulatory Programs
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371

Remediation
Basement ventilation needed to lower indoor radon to acceptable levels, 914

EPA reports considerable progress in FY 1987 in uncontrolled hazardous waste site cleanup, 364

Remedial options for leaking underground storage tanks, 428

Resampling Procedure
Air quality model evaluation and uncertainty, 406

Research and Development
The Environmental Protection Agency's hazardous waste research and development program, 377

Residences
A survey of nitrogen dioxide levels measured inside mobile homes, 647

Basement ventilation needed to lower indoor radon to acceptable levels, 914

Indoor residential NO_2 concentrations in Albuquerque, New Mexico, 392

The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Variation of radon levels in U.S. homes with various factors, 129

Residential Areas
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

Residential Heating
The effects of infiltration and insulation on the source strengths and indoor air pollution from combustion space heating appliances, 1011

Resistivity
Medium-sulfur coal and fly ash resistivity, 209

Resource Conservation and Recovery Act
A model analysis of metal partitioning in a hazardous waste incineration system, 941

Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426

Remedial options for leaking underground storage tanks, 428

Underground storage tanks: management's latest challenge, 62

Resource Recovery
Hazardous waste minimization: a strategy for environmental improvement, 59
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283
Respiratory Effects
Health significance of pulmonary function responses to airborne irritants, 881
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258
Retrofit
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Spray dryer waste management, 292
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
Reuse
Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530
R Forms
SARA Title III, Section 313—looking ahead, 1376
Right-to-Know
Emergency planning and community right-to-know, 243
Risk
Hazardous waste minimization of abrasive blast media: addressing corrosion control and environmental risks, 1048
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Risk Assessment
Development of a method for determination of methylene chloride emissions at stationary sources, 272
Including uncertainty in assessments of sulfur oxide health risks, 399
Management of carcinogenic air emissions: a case study of a power plant, 15
The Environmental Protection Agency's hazardous waste research and development program, 377
The value of monitoring for radon in the home: a decision analysis, 1380
Risk Management
NRC Committee provides new risk estimates for exposure to radon, 298
Routine Releases
Emergency planning and community right-to-know, 243
Sampling
An intercomparison of the indoor air sampling impactor and the dichotomous sampler for a 10μm cut size, 668
Compositions of particles from selected sources in Philadelphia for receptor modeling applications, 1392
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Planning and conducting sampling surveys of hazardous wastes at industrial facilities, 1426
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
SARA Title III, Section 313—looking ahead, 1376
Sampling Methods
Alternative sampling methods to measure airborne particles, 1171
Sand
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
SARA
SARA Title III, Section 313—looking ahead, 1376
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
Scrap
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932
Scrubbers
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Scrubbing
Spray dryer waste management, 292
Seasonal Effects
Variation of radon levels in U.S. homes with various factors, 129
Seawater
Use of seawater in flue gas desulfurization. A new low-cost FGD system for special applications, 969
Sight Path Measurements
Sight path measurements for visibility monitoring and research, 784
Silica
Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027
Simulated Rain
A collaborative effort to model plant response to acidic rain, 777
Simulation
Numerical simulations of plume rise, 46
In Situ Experiments
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145
In situ Treatment
Remedial options for leaking underground storage tanks, 428
Sludges
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Small Quantity Generators
Hazardous waste minimization: part IX. Waste minimization in the automotive repair industry, 1422
Source reduction and the waste management hierarchy, 681
Smoking
A comparative study of environmental tobacco smoke particulate mass measurements in an environmental chamber, 413
Solid Waste
A model analysis of metal partitioning in a hazardous waste incineration system, 941
EPA proposes national strategy for solid wastes management, 1362
Solvents
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Sorbents
Modeling of dry injection flue gas desulfurization, 1275
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027
Source Apportionment
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901
Indoor air pollution source database, 670
Origins of manganese in air particulates in California, 1152
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
Results of a receptor modeling feasibility study, 661
Source Monitoring
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
Source Reduction
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672
Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530
Source reduction and the waste management hierarchy, 681
Soybeans
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
Reduction in soybean seed yields by ozone air pollution?, 1040
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171
Specific Collecting Area
Sizing and costing of electrostatic precipitators: part I. Sizing considerations, 458
Sizing and costing of electrostatic precipitators. Part II: Costing considerations, 715
Spectroscopy
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006
Spills
Underground storage tanks: management's latest challenge, 62
Spray Dryers
Spray dryer waste management, 292
Standards
EPA proposes to retain existing NAAQS for SO_2 but seeks comments on short-term standard, 832
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
State and Local Agencies
1988 APCA Government Agencies Directory, 479
State Implementation Plans
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895
State Regulations
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
State Requirements
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297
Stationary Sources
Development of a method for determination of methylene chloride emissions at stationary sources, 272
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Statistical Analysis
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158
Air quality model evaluation and uncertainty, 406
Development of a method for determination of methylene chloride emissions at stationary sources, 272
Sample design considerations for indoor air exposure surveys, 1266
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22
Variation of radon levels in U.S. homes with various factors, 129
Storage Piles
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135
Substitution
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
Sulfur
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Sulfur Compounds
A continuous quantitative detection method for total mercaptans, organic sulphides, H_2S, and CS_2 for odouriferous emissions, 1271
Medium-sulfur coal and fly ash resistivity, 209
Sulfur Dioxide
Air pollution and morbidity: a further analysis of the Los Angeles student nurses data, 158
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388

Development and pilot plant evaluation of silica-enhanced lime sorbents for dry flue gas desulfurization, 796
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
EPA proposes to retain existing NAAQS for SO_2 but seeks comments on short-term standard, 832
ESP performance with atmospheric fluidized-bed combustion, 1455
Health significance of pulmonary function responses to airborne irritants, 881
Modeling of dry injection flue gas desulfurization, 1275
Optimization of coal beneficiation plants for SO_2 emissions control, 1281
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Silica-enhanced sorbents for dry injection removal of SO_2 from flue gas, 1027
Spray dryer waste management, 292
The Bechtel confined zone dispersion process for FGD retrofit situations. Proof-of-concept tests, 1334
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144
Transferable discharge permits for control of SO_2 emissions from Illinois power plants, 997
Water interference of pulsed fluorescence SO_2 monitor, 420

Sulfur Dioxide Emissions
Simplified models of U.S. acid rain control costs, 1523

Sulfur Gas
Sulphur gas analysis in the pulp and paper industry, 792

Sulfur Hexafluoride
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Sulfuric Acid
Effect of dilute acid on the accelerated weathering of wood, 148
Health significance of pulmonary function responses to airborne irritants, 881
Short-term respiratory effects of sulfuric acid in fog: a laboratory study of healthy and asthmatic volunteers, 258

Sulfurous acid
Effect of dilute acid on the accelerated weathering of wood, 148

Sulfur Oxides
Including uncertainty in assessments of sulfur oxide health risks, 399

Superfund
Emergency planning and community right-to-know, 243
SARA Title III, Section 313—looking ahead, 1376
State and Federal air toxics developments: disclosure strategies overtake regulation, 1371
Sunnen Products Company v. Chemtech Industries, Inc., 110
The Environmental Protection Agency's hazardous waste research and development program, 377

Surface Emission
Validation of models for predicting formaldehyde concentrations in residences due to pressed-wood products, 1403

Surrogates
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Survey
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90
The Boston residential NO_2 characterization study: I. Preliminary evaluation of the survey methodology, 22

Symptoms
Pulmonary function and symptom responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise, 28

Synthetic Resin
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512

Tennessee Valley Authority
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852

Terrain Effects
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Testing
Advanced electrostatic stimulation of fabric filtration. Performance and ecoomics, 1573
Development and testing of short response time SO_2, NO_x and O_3 analyzers, 36
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528

Test Methods
The value of monitoring for radon in the home: a decision analysis, 1380

Tethersonde
Boundary layer emission monitoring, 1158

Thermal Effects
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Thermal Mass Spectrometric Analysis
New method shows promise in tracing industrial emissions to their sources, 1058

Thermal Treatment
See Incineration
Remedial options for leaking underground storage tanks, 428

Thermodynamics
Modeling of dry injection flue gas desulfurization, 1275

Tobacco Smoke
On air pollution, environmental tobacco smoke, radon, and lung cancer, 1386

Total Suspended Particulates
PM-10: implementation of standards. A summary of the APCA/EPA International Specialty Conference, 888
The impact of migration on air quality dose-response functions: a case study of Jacksonville, Florida, 917

Toxic Air Pollutants
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259

Toxic Chemical Release Estimates
SARA Title III, Section 313—looking ahead, 1376

Toxicity Limits
Ash samples exceed toxicity limits EPA characterization study reports, 122

Tracers
Air quality model evaluation and uncertainty, 406
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901
New method shows promise in tracing industrial emissions to their sources, 1058

Transport
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753

Transportation
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814

Trees
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921

Trial Burns
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Uncertainty
Air quality model evaluation and uncertainty, 406
Including uncertainty in assessments of sulfur oxide health risks, 399

Underground Storage Tanks
Remedial options for leaking underground storage tanks, 428
The Environmental Protection Agency's hazardous waste research and development program, 377
Underground storage tanks: management's latest challenge, 62

United States
1988 APCA Government Agencies Directory, 479

University Programs
The Environmental Protection Agency's hazardous waste research and development program, 377

Urban Pollution
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901

Utilities
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327
Determination of high sulfur dioxide concentrations and carbon dioxide in electric utility plants by alkaline permanganate sampling and ion chromatography, 388
Low NO_x, high efficiency multistaged burner: fuel oil results, 1162
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Performance/cost estimates for retrofitting control technologies at 12 coal-fired power plants, 852
Spray dryer waste management, 292
Survey on the use of pulse-jet fabric filters for coal-fired utility and industrial boilers, 90

Utility Control Strategy Model
Simplified models of U.S. acid rain control costs, 1523

Vaporization
A model analysis of metal partitioning in a hazardous waste incineration system, 941

Vegetation Effects
An evaluation of the effects of ozone injury on radial growth of Ponderosa pine (*Pinus ponderosa*) in the Southern Sierra Nevada, 921
California statewide assessment of the effects of ozone on crop productivity, 928
High resolution characterization of ozone data for sites located in forested areas of the United States, 1504
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145
Soybeans and acid deposition: analyses of dose-response data from field experiments, 171
The use of lichen fumigation studies to evaluate the effects of new emission sources on class I areas, 144

Vehicular Emissions
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
Origins of manganese in air particulates in California, 1152

Ventilation
Basement ventilation needed to lower indoor radon to acceptable levels, 914

Venting
Model evaluation of the impact of thermally induced valley circulations in the Lake Powell area on long-range pollutant transport, 163

Vertical Mixing
Boundary layer emission monitoring, 1158

Vertical Particulate Profile
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419

Vinyl Chloride
Evaluation of a process gas chromatograph as a continuous emission monitor for benzene and vinyl chloride, 1528

Visibility
Acidic precipitation: a technical amplification of NAPAP's findings (a summary of the Proceedings of the APCA International Conference), 766
Sight path measurements for visibility monitoring and research, 784
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Volatile Organic Compounds
A chemical mass balance for volatile organics in Chicago, 1020
Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spectroscopy, 1006
Evaluation of method 25 nonmethane organic analyzer design, 907
Ozone air quality models: a critical review, 616

Summary of the 1988 EPA/APCA International Symposium on Measurement of Toxic and Related Air Pollutants, 1259
The scientific and technical issues facing post-1987 ozone control strategies: a conference summary, 895

Volatiles
Performance audit results for volatile POHC measurements during RCRA trial burn tests, 823

Volatilization
Remedial options for leaking underground storage tanks, 428
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Waste Exchanges
Waste exchanges: catalysts for innovation in waste minimization, 744

Waste Management
A comparison of air pollution control systems for municipal solid waste incinerators, 1081
A model analysis of metal partitioning in a hazardous waste incineration system, 941
Boundary layer emission monitoring, 1158
3-D flow modeling of a hazardous waste incinerator, 1050
Field testing and computer modeling of an oxygen combustion system at the EPA mobile incinerator, 1185
Hazardous waste minimization: a strategy for environmental improvement, 59
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Hazardous waste minimization: part VIII. Waste minimization in the pesticide formulation industry, 1293
Hospital waste disposal by incineration. Waste streams, technology, and state requirements, 1297
Managing low-volume wastes from fossil fuel fired power plants, 179
Managing municipla solid waste, 750
Municipal waste combustion ash, 1486
Particulate control, SO_2 removal, and waste management: Integrated environmental control pilot plant results, 1222
Report of the 16th APCA government affairs seminar: environmental issues—persistent problems and emerging challenges, 753
Source reduction and the waste management hierarchy, 681
Spray dryer waste management, 292
The Environmental Protection Agency's hazardous waste research and development program, 377
Underground storage tanks: management's latest challenge, 62

Waste Management News Department
Ash samples exceed toxicity limits EPA characterization study reports, 122
Center for hazardous materials research recommends 7 steps for waste reduction, 876
EPA finds insufficient hazard for added regulation of petroleum wastes, 234
EPA identifies 7 emerging technologies for further development under SITE program, 1478
EPA marine protection report for 1984–86 documents state of ocean incineration, 1104
EPA proposes national strategy for solid wastes management, 1362
EPA proposes new standards for municipal solid waste disposal landfills, 1248
EPA reports considerable progress in FY 1987 in uncontrolled hazardous waste site cleanup, 364
GAO issues report to Congress on hazardous waste insurance availability, 10
Special task force prepares resource document on hazardous waste incineration, 526
U.S. chemical plants continuing trend toward reducing hazardous waste generation, 988
Waste exchanges: catalysts for innovation in waste minimization, 744

Waste Minimization
Hazardous waste minimization: a strategy for environmental improvement, 59
Hazardous waste minimization in the manufacture of explosives, 1045
Hazardous waste minimization of abrasive blast media: addressing corrosion control and environmental risks, 1048
Hazardous waste minimization: part I. Waste reduction in the chemical industry—Du Pont's approach, 174
Hazardous waste minimization: part II. Waste minimization in the electronics products industries, 283
Hazardous waste minimization: part III. Waste minimization in the paint and allied products industry, 422
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672
Hazardous waste minimization: part V. Waste minimization in the petroleum industry, 814
Hazardous waste minimization: part VI. Waste minimization in the foundry industry, 932
Hazardous waste minimization: part VII. Hazardous waste minimization within the Department of Defense, 1042, 1174
Hazardous waste minimization: part VIII. Waste minimization in the pesticide formulation industry, 1293
Hazardous waste minimization: part IX. Waste minimization in the automotive repair industry, 1422
Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530
Plating and painting line modifications for a large vehicle repair operation, 1042
Source reduction and the waste management hierarchy, 681
The Environmental Protection Agency's hazardous waste research and development program, 377
Waste exchanges: catalysts for innovation in waste minimization, 744

Waste Reduction
Center for hazardous materials research recommends 7 steps for waste reduction, 876
Hazardous waste minimization: a strategy for environmental improvement, 59
Hazardous waste minimization: part X. The waste minimization assessment: a useful tool for the reduction of industrial hazardous wastes, 1530

Wastewater
Hazardous waste minimization: part IV. Waste reduction in the metal finishing industry, 672
Managing low-volume wastes from fossil fuel fired power plants, 179

Water
Sulfur hexafluoride as a surrogate for volatilization of organics from indoor water uses, 278

Water Content
Water content of collected aerosols in the South Coast and Southeast Desert air basins, 418

Water Stress
An air quality data analysis system for interrelating effects, standards, and needed source reductions: part 10. Potential ambient O_3 standards to limit soybean crop reduction, 1497
Responses of desert annual plants to ozone and water stress in an *in situ* experiment, 1145

Wet Scrubbing
Capital and operating costs of wet scrubbers installed on coal-fired utilities impacting the East Coast, 327

Windbreaks
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Wind Tunnel
Windbreak effectiveness for storage pile fugitive dust control: a wind tunnel study, 135

Wood
Effect of dilute acid on the accelerated weathering of wood, 148

Woodburning
A dispersion and receptor model analysis of a western community's PM-10 problem, 1419
Carbon monoxide in an urban environment: application of a receptor model for source apportionment, 901
Wood smoke impacted air: mutagenicity and chemical analysis of ambient air in a residential area of Juneau, Alaska, 652

XAD4 Resin
Adsorption characteristics of activated carbon and XAD4 resin for the removal of hazardous organic solvents, 1512